



From basic research to industrial partnership

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The FEMTO-ST Institute



FEMTO-ST (Franche-Comté Electronique Mécanique Thermique et Optique – Sciences et Technologies) is a joint research unit which is affiliated with the French National Centre of Scientific Research (CNRS), the University of Franche-Comté (UFC), the National School of Mechanical Engineering and Microtechnology (ENSMM), and the Belfort-Montbéliard University of Technology (UTBM).

FEMTO-ST was founded in January 2004 from the merger of 5 different laboratories active in different fields of engineering science: mechanics, optics and telecommunications, electronics, time-frequency, energetics and fluidics.

Within the CNRS, FEMTO-ST belongs to the [Sciences and Technologies of Information and Engineering Department \(ST2I\)](#). It gathers complementary skills, develops multidisciplinary with an emphasis on scientific excellence and innovation.

Among the 350 employees including 200 permanent positions (130 researchers, professors or assistant-professors and 70 engineers, technicians and administrative staff), about 140 doctorate students receive a high-level training in scientific research.

Research

Within FEMTO-ST, research in engineering sciences has long been influenced by the regional manufacturing tradition of microtechniques. It is organized according to the following different research departments:

- Flows, Surfaces and Transfers department (CREST)
- Chronometry, Electronics and Piezoelectricity department (LCEP)
- Raymond Chaléat Applied Mechanics department (LMARC)
- Pierre-Michel Duffieux Optics department (LOPMD)
- Oscillators Physics and Metrology department (LPMD)

In addition, multidisciplinary research projects aggregate the researchers' competences on specific themes or objectives.

Technology

FEMTO-ST runs a microfabrication technology centre, which is recognized nation-wide, mixing technologies from microelectronics and micromechanics.

Partnership

The institute has an active policy of developing partnerships with both public organisms and industry. On the national level, it participates in the joint laboratory CNRS-Industry LPMX with the Temex firm and also in the FC-LAB institute in Belfort which works on fuel cell systems. It also manages a laboratory associated with the National Laboratory for Metrology of Time and Frequencies. At the international level, it is involved in the international joint unit (UMI) between Georgia Tech Atlanta in the USA and the CNRS, the European Joint Laboratory in Microtechnology (LEA) with Swiss research institutes, and the Franco-Japanese laboratory (LIMMS) with Tokyo University.

Location

FEMTO-ST is present at 6 different sites of the university campuses of Besançon, Belfort and Montbéliard.